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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,759	01/31/2006	George Marmaropoulos	US030262US	6057

24737 7590 06/14/2007
PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
CHAMBERS, TRAVIS SLOAN	

ART UNIT	PAPER NUMBER
2833	

MAIL DATE	DELIVERY MODE
06/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/566,759

Applicant(s)

MARMAROPOULOS ET AL.

Examiner

Travis Chambers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 6 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 13-19 and 24 is/are pending in the application.
- 4a) Of the above claim(s) 5-12 and 20-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-4, 13-19 and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 13 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaario (6563424) in view of Schmidt (5954520).

In reference to claims 1, Kaario teaches a first portion (51 ; figure 2) and means for forming an electrical connection; and a second portion (52 ; figure 2) comprising means for forming an electrical connection when coupled with the first portion (51), wherein the first (51) and second (52) portions form a mechanical connection and an electrical connection when connected, the garment (11 ; figure 1) further including : a sensor (30 ; figure 1) for sensing a coupling of the interconnect in the series of interconnects; an attachable device (40 ; figure 1), wherein the attachable device (40) is adapted to be controlled in response to a number of coupled or uncoupled interconnects in the series of interconnects sensed by the sensor (30).

However Kaario does not teach including a magnet with a first magnetic direction.

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Schmidt teaches a first portion (22 ; figure 2) including a magnet (28 ; figure 2) with a first magnetic direction.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Schmidt to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Schmidt because, as taught by Schmidt Col. 1 line(s) 11-15 and Col. 3 line(s) 30-36, it improves the connection between the contacts by reducing the chance of unwanted disconnection caused by an external force.

In reference to claim 2, Kaario shows substantially the invention as claimed.

However Kaario does not teach the first portion and second portion form the mechanical connection using magnetic attraction generated by the magnet.

Schmidt teaches the first portion (51) and second (52) portion form the mechanical connection using magnetic attraction generated by the magnet (28).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Schmidt to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Schmidt because, as taught by Schmidt Col. 1 line(s) 11-15 and Col. 3 line(s) 30-36, it improves the alignment for connection by making it easier to locate the connectors in range to complete mating.

In reference to claim 3, Kaario shows substantially the invention as claimed.

However Kaario does not teach the second portion further comprises a magnet with a second magnetic direction.

Schmidt teaches the second portion (near lead line 28 ; figure 2) further comprises a magnet (44 ; figure 2) with a second magnetic direction.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Schmidt to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Schmidt because, as taught by Schmidt Col. 1 line(s) 11-15 and Col. 3 line(s) 30-36, it improves the alignment for connection by having a magnet of opposite polarity making it easier position the connectors to complete mating.

In reference to claim 4, Kaario teaches the electrical connection is aligned by the mechanical connection (with 63 inserting into 56 ; figure 2).

In reference to claim 13, shows substantially the invention as claimed.

However Kaario does not teach the means for forming an electrical connection of the first or second portion comprises the magnet.

Schmidt teaches the means for forming an electrical connection of the first (51) or second (52) portion comprises the magnet (28).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Schmidt to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Schmidt because, as taught by Schmidt Col. 1 line(s) 11-15 and Col. 3 line(s) 30-36 it makes it easier to locate the connectors in range to complete mating by enhancing the lineup for connection.

In reference to claim 24, Kaario teaches a series (an arrangement) of interconnects (formed at 21-24,26 ; figure 1), each interconnect comprising: a first portion (51 ; figure 2) and means for forming an electrical connection; and a second portion (52 ; figure 2) comprising means for forming an electrical connection when coupled with the first portion (51), wherein the first (51) and second (52) portions form a mechanical connection and an electrical connection when connected, the garment (11 ; figure 1) further comprising: a sensor (30 ; figure 1) for sensing a coupling of the interconnect in the series of interconnects; an attachable device (40 ; figure 1), wherein the attachable device (40) is adapted to be controlled in response to a number of coupled or uncoupled interconnects in the series of interconnects sensed by the sensor (30).

However Kaario does not teach including a magnet with a first magnetic direction.

Schmidt teaches a first portion (22 ; figure 2) including a magnet (28 ; figure 2) with a first magnetic direction.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Schmidt to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Schmidt because, as taught by Schmidt Col. 1 line(s) 11-15 and Col. 3 line(s) 30-36, the connection between the contacts are improved by limiting unwanted disconnection caused by an external force.

Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaario (6563424) in view of A. F Van Valer (3431428).

In reference to claim 14, Kaario teaches a first portion (51 ; figure 2) and means for forming an electrical connection; and a second portion (52 ; figure 2) comprising means for forming an electrical connection when coupled with the first portion (51), wherein the first (51) and second (52) portions form a mechanical connection and further form an electrical connection when mechanically connected, the garment (11 ; figure 1) further including: a sensor (30 ; figure 1) for sensing a coupling of the interconnect in the series of interconnects; an attachable device (40 ; figure 1), wherein the attachable device (40) is adapted to be controlled in response to a number of coupled or uncoupled interconnects in the series of interconnects sensed by the sensor (30).

However Kaario does not teach including an electromagnet and means for forming an electrical connection; a means for supplying current to the electromagnet.

Valer teaches an electromagnet (100 ; figure 3) and means for forming an electrical connection; a means for supplying current (16 through 98 ; figure 2) to the electromagnet (100).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Valer to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Valer because, as taught by Valer Col. 1 line(s) 25-35, it improves the ease of removing the connection of the connectors preventing damage to the device.

In reference to claim 15, Kaario teaches the means for supplying current further comprises an electronic device (17 ; figure 10).

In reference to claim 16, Kaario teaches the electronic device (17) is a wearable (able to be carried) electronic device.

In reference to claim 17, Kaario shows substantially the invention as claimed.

However Kaario does not teach the second portion further comprises a magnet.

Valer teaches the second portion (30 ; figure 3) further comprises a magnet (100 ; figure 3).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Valer to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Valer because, as taught by Valer Col. 1 line(s) 25-35, it allows automatic demagnetization of the electromagnet when the current source is turn off making it easier to part the connectors..

In reference to claim 18, Kaario shows substantially the invention as claimed.

However Kaario does not teach the magnet is an electromagnet.

Valer teaches the magnet (100 ; figure 3) is an electromagnet.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Valer to improve the invention of Kaario.

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One skilled in the art would have been motivated to use the teachings of Valer because, as taught by Valer Col. 1 line(s) 25-35, the connection between the contacts can be removed safely reducing the possibility of damage that could occur during unwanted disconnection.

In reference to claim 19, Kaario shows substantially the invention as claimed.

However Kaario does not teach the second portion comprises a substance capable of being attracted by a magnet.

Valer teaches the second portion (30 ; figure 3) comprises a substance (which allows the functioning of the 100) capable of being attracted by a magnet.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use the teaching of Valer to improve the invention of Kaario.

One skilled in the art would have been motivated to use the teachings of Valer because, as taught by Valer Col. 1 line(s) 25-35, it improves the attraction to the magnet allowing better securement between connectors.

Response to Arguments

-- Applicant's arguments filed in response to the previous office action have been considered, but they are moot in view of the new grounds of rejection.

Conclusion

- ☐ The prior art listed on PTO form 892 that is made of record and not relied upon is considered pertinent to applicant's disclosure because it shows the state of the art with respect to applicant's claimed invention.
- This application contains claims 1-4, 13-19 and 24 drawn to an invention nonelected with traverse in Papers dated 03/26/2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
- ☐ Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Travis Chambers whose telephone number is 571-272-6813. The examiner can normally be reached on Monday-Friday 8am - 4:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on 571-272-2001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Travis Chambers
TC
5/31/2007

/James Harvey/
James Harvey
Primary Examiner